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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,533	11/01/2001	Jeff A. Zablocki	99-913X	6331

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EXAMINER	
CRANE, LAWRENCE E	
ART UNIT	**PAPER NUMBER**
1623	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/980,533	ZABLOCKI ET AL.	
	Examiner	Art Unit	
	L. E. Crane	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/01/2001 (IDS)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/01/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

No claims have been cancelled and no preliminary amendments filed as of the date of the instant Office action. An Information Disclosure Statement (IDS) has been received with all cited references and made of record.

Claims **1-42** remain in the case.

The instant disclosure does not include "Cross-References to Related Applications." See 37 C.F.R. §1.78 and MPEP at §201.11. Applicant is respectfully requested to include the requested information as the first paragraph at page one of the disclosure.

Claims **1-42** are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claims have not met the written description standard of *Regents of the University of California v. Eli Lilly* (119F.3d 1559 at 1568; 43 USPQ2d 1398 at 1406 (Fed. Cir 1997)) which MPEP §2163 at page 2100-162, column 1, quotes as follows: "A definition by function alone 'does not suffice' to describe a coding sequence 'because it is only an indication of what the gene does, rather than what it is.'" Applicant continues to rely on generic functional terminology including "heterocyclyl," "aryl," "heteroaryl amide" and "heteroaryl," wherein the disclosure definition thereof does not overcome the functionality of the noted term.

Claims **1-42** are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one of ordinary skill in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention; the scope is excessive in view of the disclosed exemplifications.

The definitions of substituents in claims **1-28** are directed to a vast number of chemical compounds which have not been described in the instant disclosure in a manner permitting the ordinary practitioner to have the guidance necessary to make a very large proportion of the compounds encompassed. Examiner finds only 27 compounds provided in the "Examples" section all of which have a single N^6-substituent (3-oxalanyl) unmodified with additional substituents. In addition none of the disclosed exemplary compounds discloses a structure with

the multiple layers of substituents on top of substituents provided for by the noted claim at all of the variable substituent locations. And the 8 compound subset tested for binding to adenosine receptors were not further tested for efficacy in the treatment of any specific disease conditions.

Claims **1-42** are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one of ordinary skill in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The fundamental issue here is whether practicing the full scope of the instant invention is possible without undue experimentation. As provided for in *In re Wands* (858 F.2d 731, 737; 8 USPQ 2d 1400, 1404 (Fed Cir. 1988) the minimum factors to be considered in determination of whether a conclusion of "undue experimentation" is appropriate are as follows:

A. The breadth of the claims is excessive for the reasons noted in the rejection supra.

B. The nature of the invention is directed to 3',4'-diacyl-5'-deoxy-2,N^6,5'-trisubstituted adenosines wherein the 5'-substituent is always attached through a sulfur, pharmaceutical compositions thereof, and methods of treating wherein the adenosine A_1 receptor is the site wherein a compound defined above has its medicinal effect.

C. The state of the prior art well defined by the prior art made of record by applicant and examiner, but aside from applicant's issued patent, does not read on the instant claims.

D. The level of one or ordinary skill is high in the area of the compounds prepared and tested, but is low in the areas of the claims wherein there are no exemplifications found.

E. The level of predictability in the art is high in the area of compounds with only a single layer of substituents, but progressively depreciates as the layers of substituents makes approach of the structural components responsible for medicinal activity to the active site increasingly difficult. There is no disclosure permitting analysis of the tradeoffs produced by additional of layers of substitution.

F. The amount of direction provided by the inventor is limited to the 27 synthetic examples provided and the subset of 8 biologically tested exemplifications, none of which have been shown to be effective in the treatment of any disease condition.

G. The existence of working examples is limited to 27 synthetic exemplifications and a subset of 8 compounds tested *in vitro* for pharmaceutical activity.

H. The quantity of experimentation needed to make or use the invention based on the content of the disclosure is deemed to be unacceptable for compounds defined to include substituent groups not exemplified by the instant disclosure as having the desired medicinally appropriate activity. Examiner suggests that the scope of the instant claims needs to be cut back considerably in order to overcome this rejection.

Claims **25, 26, 27, 28, 34 and 39** are objected to because of the following informalities:

In claim **25** at line 3, there appears to be terminal punctuation immediately preceding the term "or."

In claim **28** the spaces which sometimes occur within a name are inappropriate. Applicant is requested to reformat the claim so that each name begins at the left margin and so that inappropriate spaces are eliminated from the middle of each name as necessary.

In claims **26, 27, 34 and 39** the repeated use of the term "or" is unnecessarily duplicative. Applicant is respectfully requested to abbreviate the noted terms in each of the noted claims to read -- any one of claims 1 to 16 -- or the like.

Appropriate correction is required.

Claims **1-42** are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims **1-42** the terms "composition of matter" and "pharmaceutical composition of matter" are terms of art no longer in use in USPTO prosecutions. Applicant is respectfully requested to substitute the terms
-- compound -- and -- pharmaceutical composition --, respectively, and in the latter type of

claim to please include the term
-- and a pharmaceutically acceptable carrier or excipient -- at the end of the first such claim (the underlined terms are particularly important).

In claims **1-11, 13, 14, 21 and 23**, lines directed to variable R_3, R_4 and sometimes R_5, etc., the Markush group is incomplete (typically the terms "consisting" and "and" are missing, an extra "and" is present, or "or" is present instead of a comma, etc.). Markush groups are properly formulated with the term -- selected from the group consisting of [A], [B], ... and [R] --. Brief inspection found structural errors in 38 different Markush groups within each of the noted claims.

In claims **18 and 20**, the term "compound" is technically inaccurate. Did applicant intend the term --substituent--?

In claim **18, 20 and 21** the term "and mixtures thereof" is inapplicable to substituents. These claims need to be redrafted minus this term. Please note comments about proper Markush format above.

In claim **21**, line 2, the structure is unclear and needs to be redrafted.

Claims **21** and **25** are confusing because both claims are directed to the same definitional area but use different variables to define the structures of the substituent variable R^1. In the interest of clarity, examiner respectfully requests consolidation of the definitions of variable R^1 into a single claim and into one set of nested variables.

In claim **22** is unclear. Did applicant intend the claim to read
-- wherein R_1''' and R_1'''' taken together are a single oxygen atom which forms a three membered ring --? If so, then the noted claim lacks antecedent basis in claim **21** wherein this alternative has not been provided for and would be directed to subject matter specifically excluded by claim **1** at line 6.

In claims **23 and 24**, line 2, the term "substitute lower alkyl" is a misspelling. Did applicant intend the term to read
-- substituted lower alkyl --? Also, if the suggested correction is appropriate, the noted claims

are incomplete because the identity of the additional substituents on the "lower alkyl" substituent has not been defined.

In claim **28**, the term "The composition of claim **1** wherein the compound is selected from the group of compounds consisting of " is technically incorrect. Did applicant intend the term to read
-- The ~~composition~~ compound of claim **1** ~~wherein the compound is~~ selected from the group ~~of compounds~~ consisting of --?

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel,* 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam,* 686 F. 2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi,* 759 F.2d 887, 225 USPQ 645 (Fed. Cir 1985); and *In re Goodman,* 29 USPQ 2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 C.F.R. § 1.321(b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. §1.78(d).

Effective January 1, 1994, a registered attorney or agent or record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R. §3.73(b).

Claims **1-42** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims **1-13** of U. S. Patent No. **6,605,597** (PTO-892 ref. **D**). Although the conflicting claims are not identical, they are not patentably distinct from each other because the method of treatment and the alleged active ingredients are directed to substantially overlapping subject matter.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. §1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §§102(f) or (g) prior art under 35 U.S.C. §103(a).

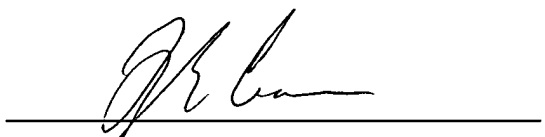
Papers related to this application may be submitted to Group 1600 via facsimile transmission (FAX). The transmission of such papers must conform with the notice published in the Official Gazette (1096 OG 30, November 15, 1989). The telephone number to FAX (unofficially) directly to Examiner's computer is 571-273-0651. The telephone number for sending an Official FAX to the PTO is 703-872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner L. E. Crane whose telephone number is **571-272-0651**. The examiner can normally be reached between 9:30 AM and 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson, can be reached at **571-272-0661**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is **571-272-1600**.

LECrane:lec
03/15/2005



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